

**REMARKS**

This is a full and timely response to the outstanding non-final Office Action mailed May 21, 2003. Claims 1-23 remain pending in the present application. Reconsideration and allowance of the application and presently pending claims 1-23 are respectfully requested.

**A. Response To Claim Rejections Under 35 U.S.C. Section 102****1. Claims 1-9, 12, 14-15**

Independent claim 1, as well as claims 2-9, 12, and 14-15 which depend from claim 1 have all been rejected under 35 U.S.C. Section 102(b) as allegedly anticipated by Sorensen, US. Patent 5,942,975. Applicant respectfully traverses these rejections because the Sorensen reference does not disclose all of the elements of these claims as discussed more fully below.

**a. Claim 1**

For a proper rejection of a claim under 35 U.S.C. Section 102(b), the cited reference must disclose all elements of the claim. *See, e.g., E.I. du Pont de Nemours & Co. v. Phillips Petroleum Co.*, 849 F.2d 1430, 7 USPQ2d 1129 (Fed. Cir. 1988).

Independent claim 1 states:

A system for detecting user entry into a defined danger zone surrounding a saw blade comprising:

- a non-conductive member defining an opening therein for receiving a saw blade;
- a conductive sensor situated on the non-conducting member adjacent the opening to define a danger zone;
- a voltage source for applying a voltage to the sensor; and

a monitor circuit configured to detect a change in the capacitance of the sensor to signal a user entry into the danger zone.

(Emphasis added)

Independent claim 1 is allowable for at least the reason that Sorensen does not disclose, teach, or suggest the features that are highlighted in claim 1 above.

Sorensen discloses a "generator" that is "connected to the object to be protected, for instance a person 1 holding a handle 2 of a power tool (chain saw) 3 connected to the generator." Sorensen, Col 8, lines 44-47. The Sorensen system further includes a "receiver" that is "connected to the potentially dangerous active portion, for instance a chain blade member 4 of the chain-saw." Sorensen, Col 8, lines 47-49.

In operation, Sorensen determines a "security distance S between, in the depicted situation, the head 5 of the person 1 and the blade member 4 of the chain-saw" which is "the distance at which the signal generated by the generator conducted to the person 1 and transmitted to the receiver through the blade member 4 complies with the conditions necessary for activating protective measures." Sorensen, Col 8, lines 49-55 (emphasis added). The other embodiments in Sorensen similarly only disclose a system where the receiver is connected to the active portion or blade portion and the security distance is determined by a transmission from the protected object directly to the active portion/blade portions. *See, e.g.*, Sorensen, Col 10, lines 44-49.

Nowhere does Sorensen disclose, teach or even suggest a "non conductive member defining an opening therein for receiving a saw blade" with a "conductive sensor situated on the non-conducting member adjacent the opening to define a danger zone" irrespective of

the location (or even presence ) of the saw blade, and through a sensor not connected directly to a saw blade as claimed in Applicant's claim 1.

For at least the reasons discussed above, Sorensen does not disclose, teach, or suggest all of the elements of claim 1, and Sorensen does not anticipate claim 1 under 35 U.S.C. Section 102(b). Accordingly, Applicant respectfully requests that this rejection of claim 1 be withdrawn and requests that claim 1 be allowed.

b. Claims 2-9, 12, and 14-15

Since independent claim 1 is allowable over the prior art of record, then its dependent claims 2-9, 12, and 14-15 are allowable as a matter of law, because these dependent claims contain all features/elements/steps of their respective independent claim 1. *See In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988). Additionally and notwithstanding the foregoing reasons for the allowability of claim 1, these dependent claims recite further features/steps and/or combinations of features/steps (as is apparent by examination of the claims themselves) that are patentably distinct from the prior art of record. Accordingly, there are additional reasons why these dependent claims are allowable and some of these reasons are set forth hereafter, as examples.

i) Claim 2

Claim 2 recites "[t]he system of claim 1, wherein the sensor at least partially surrounds the opening." Nothing in Sorensen discusses an opening for receiving a saw blade, or a sensor that at least partially surrounds such an opening. The Office Action cites Sorensen, Col 8, lines 41-58 as disclosing the feature claimed in claim 2. However, the cited portion of Sorensen discusses a hand-held chain-saw implementation of the Sorensen

invention with a handle that conducts a signal to the operator for transmission to a blade member that receives a signal.

Nothing in the cited portion of Sorensen discloses, teaches, or suggests a non-conductive member defining an opening therein for receiving a saw blade and a conductive sensor situated on the non-conductive member adjacent the opening to define a danger zone, where the sensor at least partially surrounds the opening.

For at least this additional reason, Sorensen does not disclose all of the elements of claim 2, and therefore does not anticipate claim 2 under 35 U.S.C. Section 102(b). Accordingly, Applicant respectfully requests that this rejection of claim 2 be withdrawn and requests that claim 2 be allowed.

ii) Claim 3

Claim 3 recites "[t]he system of claim 2, wherein the non-conducting member defines an outfeed end, and wherein a portion of the sensor situated adjacent the outfeed end is enlarged to define an enlarged outfeed danger zone." In addition to the reasons set forth above with respect to claim 1 and claim 2, claim 3 is also allowable for a variety of additional reasons. The Office Action again cites Sorensen, Col 8, lines 41-58 as disclosing claim 3, stating that the claim is "met by the security distance S between the head 5 of the person 1 and the blade member 4 of the chain-saw." Office Action, p. 3.

As discussed in paragraph 28 of the written description and as depicted in FIGs. 3 and 4 of the present application, various embodiments of the non-conducting member may include an outfeed end opposite the portion of a saw blade that initially receives the work piece being cut. Further, as discussed in paragraph 28, in various embodiments all, most, or only a portion of the sensor may be configured to define a danger zone that is enlarged at

the outfeed end of the non-conducting member for various reasons, including the provision of increased reach-around detection.

Nothing in Sorensen discloses, teaches, or suggests a non-conducting member with an outfeed end, much less a portion of a sensor positioned adjacent to the outfeed end to define an enlarged outfeed danger zone. For at least this additional reason, Sorensen does not disclose all of the elements of claim 3, and therefore does not anticipate claim 3 under 35 U.S.C. Section 102(b). Accordingly, Applicant respectfully requests that this rejection of claim 3 be withdrawn and requests that claim 3 be allowed.

iii) Claim 4

Claim 4 recites "[t]he system of claim 1, further comprising a plurality of sensors situated on the non-conducting member defining a plurality of danger zones." In addition to the reasons set forth above with respect to claim 1, claim 4 is also allowable for a variety of additional reasons. The Office Action cites Sorensen, Col 10, lines 39-54, stating that the plurality of danger zones element is met because "the system accepts lack of direct contact between the person 1 and the plate 25 illustrating that the signal may also be transmitted capacitively at 'intermediate points.'" Office Action, p. 3.

Applicant submits that the Office Action misconstrues the cited portion of Sorensen and that nothing in Sorensen discloses, teaches or suggests a plurality of sensors defining a plurality of danger zones as claimed by claim 4. As an initial matter, nothing in the cited (or any other portion) of Sorensen discusses or discloses a system using a plurality of sensors. As even the cited portion of Sorensen states, only a single sensor connected to the blade is disclosed, as the "rotary saw blade 26 is connected to a signal

receiver. . . . The security distance S represents the distance at which the signal is received.” Sorensen, Col 10, lines 44-49 (emphasis added).

Additionally, the reference in Sorensen to “intermediate points” does not disclose, suggest or teach multiple danger zones. Rather, that portion of the reference appears to disclose that the Sorensen system will still work if the person is not actually “standing on the conductive plate 25 or the like connected to a signal generator” as discussed in Col 10, lines 40-42. In other words, the Sorensen system is disclosed to operate if the person is not standing on the plate but still comes within a distance S of the saw blade, with the distance S defining a single danger zone rather than a plurality of dangers zones. By contrast, claim 4 claims multiple sensors situated on the non-conducting member defining a plurality of danger zones.

For at least these additional reasons, Sorensen does not disclose all of the elements of claim 4, and therefore does not anticipate claim 4 under 35 U.S.C. Section 102(b). Accordingly, Applicant respectfully requests that this rejection of claim 4 be withdrawn and requests that claim 4 be allowed.

## **2. Claims 16-20**

Independent Claim 16, as well as Claims 17-20 which depend from Claim 16 have all been rejected under 35 U.S.C. Section 102(b) as allegedly anticipated by Sorensen. Applicant respectfully traverses these rejections because the Sorensen reference cited does not disclose all of the elements of these claims as discussed more fully below.

### **a. Claim 16**

For a proper rejection of a claim under 35 U.S.C. Section 102(b), the cited reference must disclose all elements/features/steps of the claim. *See, e.g., E.I. du Pont de*

Nemours & Co. v. Phillips Petroleum Co., 849 F.2d 1430, 7 USPQ2d 1129 (Fed. Cir. 1988).

Independent claim 16 states:

A power saw system comprising:

- a blade;
- a motor driving the blade;
- a table supporting a work piece, the table defining an opening therethrough;
- a non-conductive insert defining a slot therethrough for receiving a saw blade, the non-conducting insert received by the opening in the table;**
- a conductive sensor situated on the insert adjacent the slot to define a danger zone;**
- a voltage source for applying a voltage to the sensor; and
- a monitor circuit configured to detect a change in the capacitance of the sensor to signal a user entry into the danger zone.

(Emphasis added)

Independent claim 16 is allowable for at least the reason that Sorensen does not disclose, teach, or suggest the features that are highlighted in claim 16 above. The Office Action cites the "handle 2" and the "blade member 4" in Col 8, lines 41-65 as disclosing these two elements. However, Applicant submits that the Office Action's reliance on these two elements of the Sorensen system is misplaced.

Sorensen discloses a "generator" that is "connected to the object to be protected, for instance a person 1 holding a handle 2 of a power tool (chain saw) 3 connected to the generator." Sorensen, Col 8, lines 44-47. The Sorensen system further includes a "receiver" that is "connected to the potentially dangerous active portion, for instance a chain blade member 4 of the chain-saw." Sorensen, Col 8, lines 47-49.

In operation, Sorensen determines a "security distance  $S$  between, in the depicted situation, the head 5 of the person 1 and the blade member 4 of the chain-saw" which is "the distance at which the signal generated by the generator conducted to the person 1 and transmitted to the receiver through the blade member 4 complies with the conditions necessary for activating protective measures." Sorensen, Col 8, lines 49-55 (emphasis added). The other embodiments in Sorensen similarly only disclose a system where the receiver is connected to the active portion or blade portion and the security distance is determined by a transmission from the protected object directly to the active portion/blade portions. *See, e.g.*, Sorensen, Col 10, lines 44-49. Thus, the Sorensen system does not disclose, suggest, or teach a system where the danger zone is defined by irrespective of the location of the saw blade, and through a sensor not connected directly to the saw blade as claimed in Applicant's claim 16.

Additionally, nothing in the "handle" of Sorensen discloses, teaches, or suggests a table supporting a work piece, the table defining an opening therethrough, a non-conductive insert defining a slot therethrough for receiving a saw blade, the non-conducting insert received by the opening in the table, and a conductive sensor situated on the insert adjacent the slot to define a danger zone as claimed by claim 16.

For at least the reasons discussed above, Sorensen does not disclose all of the elements of claim 16, and therefore Sorensen does not anticipate claim 16 under 35 U.S.C. Section 102(b). Accordingly, Applicant respectfully requests that this rejection of claim 16 be withdrawn and requests that claim 16 be allowed.



b. Claims 17-20

Since independent claim 16 is allowable over the prior art of record, then its dependent claims 17-20 are allowable as a matter of law, because these dependent claims contain all features/elements/steps of their respective independent claim 16. *See In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988). Additionally, and notwithstanding the foregoing reasons for the allowability of claim 16, these dependent claims recite further features/steps and/or combinations of features/steps (as is apparent by examination of the claims themselves) that are patentably distinct from the prior art of record. Accordingly, there are additional reasons why these dependent claims are allowable.

3. Claim 21

Independent Claim 21 was also rejected under 35 U.S.C. Section 102(b) as allegedly anticipated by Sorensen. Applicant respectfully traverses this rejection because the Sorensen reference cited does not disclose all of the elements of this claim. For a proper rejection of a claim under 35 U.S.C. Section 102(b), the cited reference must disclose all elements/features/steps of the claim. *See, e.g., E.I. du Pont de Nemours & Co. v. Phillips Petroleum Co.*, 849 F.2d 1430, 7 USPQ2d 1129 (Fed. Cir. 1988).

Independent claim 21 states:

A power saw system comprising:

- a blade;
- a motor driving the blade;
- a non-conducting blade guard having the blade mounted therein;
- a conductive sensor situated on the blade guard adjacent the blade to define a danger zone;
- a voltage source for applying a voltage to the sensor; and

a monitor circuit configured to detect a change in the capacitance of the sensor to signal a user entry into the danger zone.

(Emphasis added)

Independent claim 21 is allowable for at least the reason that Sorensen does not disclose, teach, or suggest the features that are highlighted in claim 21 above. The Office Action cites the "handle 2" and the "blade member 4" in Col 8, lines 41-65 as disclosing these two elements. However, Applicant submits that the Office Action's reliance on these two elements of the Sorensen system is misplaced.

Sorensen discloses a "generator" that is "connected to the object to be protected, for instance a person 1 holding a handle 2 of a power tool (chain saw) 3 connected to the generator." Sorensen, Col 8, lines 44-47. The Sorensen system further includes a "receiver" that is "connected to the potentially dangerous active portion, for instance a chain blade member 4 of the chain-saw." Sorensen, Col 8, lines 47-49.

In operation, Sorensen determines a "security distance S between, in the depicted situation, the head 5 of the person 1 and the blade member 4 of the chain-saw" which is "the distance at which the signal generated by the generator conducted to the person 1 and transmitted to the receiver through the blade member 4 complies with the conditions necessary for activating protective measures." Sorensen, Col 8, lines 49-55 (emphasis added). The other embodiments in Sorensen similarly only disclose a system where the receiver is connected to the active portion or blade portion and the security distance is determined by a transmission from the protected object directly to the active portion/blade portions. See, e.g., Sorensen, Col 10, lines 44-49. Thus, the Sorensen system does not disclose, suggest, or teach a system where the danger zone is defined by irrespective of the

location of the saw blade, and through a sensor not connected directly to the saw blade as claimed in Applicant's claim 21.

Additionally, nothing in the "handle" of Sorensen discloses, teaches, or suggests a non-conducting blade guard having the blade mounted therein, and a conductive sensor situated on the blade guard adjacent the blade to define a danger zone as claimed by claim 21.

For at least the reasons discussed above, Sorensen does not disclose all of the elements of claim 21, and therefore Sorensen does not anticipate claim 21 under 35 U.S.C. Section 102(b). Accordingly, Applicant respectfully requests that this rejection of claim 21 be withdrawn and requests that claim 21 be allowed.

#### **4. Claim 22**

Independent Claim 22 was also rejected under 35 U.S.C. Section 102(b) as allegedly anticipated by Sorensen. Applicant respectfully traverses this rejection because the Sorensen reference cited does not disclose all of the elements of this claim. For a proper rejection of a claim under 35 U.S.C. Section 102(b), the cited reference must disclose all elements/features/steps of the claim. *See, e.g., E.I. du Pont de Nemours & Co. v. Phillips Petroleum Co.*, 849 F.2d 1430, 7 USPQ2d 1129 (Fed. Cir. 1988).

Independent claim 22 recites:

A system for detecting user entry into a defined danger zone surrounding a saw blade, comprising:

- a non-conducting member defining an opening therein for receiving a saw blade;**
- a conductive sensor situated on the non-conducting member adjacent the opening to define a danger zone;**

a voltage source for applying a voltage to the sensor; and  
means for detecting a change in capacitance of the sensor to signal a user  
entry into the danger zone.

(Emphasis added)

Independent claim 22 is allowable for at least the reason that Sorensen does not disclose, teach, or suggest the features that are highlighted in claim 22 above. The Office Action cites the "handle 2" and the "blade member 4" in Col 8, lines 41-65 as disclosing these two elements. However, Applicant submits that the Office Action's reliance on these two elements of the Sorensen system is misplaced.

Sorensen discloses a "generator" that is "connected to the object to be protected, for instance a person 1 holding a handle 2 of a power tool (chain saw) 3 connected to the generator." Sorensen, Col 8, lines 44-47. The Sorensen system further includes a "receiver" that is "connected to the potentially dangerous active portion, for instance a chain blade member 4 of the chain-saw." Sorensen, Col 8, lines 47-49.

In operation, Sorensen determines a "security distance S between, in the depicted situation, the head 5 of the person 1 and the blade member 4 of the chain-saw" which is "the distance at which the signal generated by the generator conducted to the person 1 and transmitted to the receiver through the blade member 4 complies with the conditions necessary for activating protective measures." Sorensen, Col 8, lines 49-55 (emphasis added). The other embodiments in Sorensen similarly only disclose a system where the receiver is connected to the active portion or blade portion and the security distance is determined by a transmission from the protected object directly to the active portion/blade portions. See, e.g., Sorensen, Col 10, lines 44-49. Thus, the Sorensen system does not

disclose, suggest, or teach a system where the danger zone is defined by irrespective of the location (or even presence ) of the saw blade, and through a sensor not connected directly to the saw blade as claimed in Applicant's claim 22.

Additionally, nothing in the "handle" of Sorensen discloses, teaches, or suggests a non-conducting member defining an opening therein for receiving a saw blade, and a conductive sensor situated on the non-conducting member adjacent the opening to define a danger zone.

For at least the reasons discussed above, Sorensen does not disclose all of the elements of claim 22, and therefore Sorensen does not anticipate claim 22 under 35 U.S.C. Section 102(b). Accordingly, Applicant respectfully requests that this rejection of claim 22 be withdrawn and requests that claim 22 be allowed.

#### **5. Claim 23**

Independent Claim 23 was also rejected under 35 U.S.C. Section 102(b) as allegedly anticipated by Sorensen. Applicant respectfully traverses this rejection because the Sorensen reference cited does not disclose all of the elements of this claim. For a proper rejection of a claim under 35 U.S.C. Section 102(b), the cited reference must disclose all elements or features of the claim. *See, e.g., E.I. du Pont de Nemours & Co. v. Phillips Petroleum Co.*, 849 F.2d 1430, 7 USPQ2d 1129 (Fed. Cir. 1988).

Independent claim 23 recites:

A method for detecting user entry into a defined danger zone surrounding a saw blade, comprising:

**situating a non-conducting member adjacent a saw blade, the non-conducting member having a conductive sensor attached thereto defining a danger zone;**

applying a voltage to the sensor; and  
detecting a change in capacitance of the sensor to signal a user entry into the  
danger zone.

(Emphasis added)

Independent claim 23 is allowable for at least the reason that Sorensen does not disclose, teach, or suggest the elements that are highlighted in claim 23 above. The Office Action cites the "handle 2" and the "blade member 4" in Col 8, lines 41-65 as disclosing this element. However, Applicant submits that the Office Action's reliance on these portions of the Sorensen system is misplaced.

Sorensen discloses a "generator" that is "connected to the object to be protected, for instance a person 1 holding a handle 2 of a power tool (chain saw) 3 connected to the generator." Sorensen, Col 8, lines 44-47. The Sorensen system further includes a "receiver" that is "connected to the potentially dangerous active portion, for instance a chain blade member 4 of the chain-saw." Sorensen, Col 8, lines 47-49.

In operation, Sorensen determines a "security distance S between, in the depicted situation, the head 5 of the person 1 and the blade member 4 of the chain-saw" which is "the distance at which the signal generated by the generator conducted to the person 1 and transmitted to the receiver through the blade member 4 complies with the conditions necessary for activating protective measures." Sorensen, Col 8, lines 49-55 (emphasis added). The other embodiments in Sorensen similarly only disclose a system where the receiver is connected to the active portion or blade portion and the security distance is determined by a transmission from the protected object directly to the active portion/blade portions. *See, e.g.*, Sorensen, Col 10, lines 44-49. Thus, the Sorensen system does not

disclose, suggest, or teach a method where a danger zone is defined by irrespective of the location (or even presence ) of the saw blade, and through a sensor not connected directly to the saw blade as claimed in Applicant's claim 23.

Additionally, nothing in the "handle" of Sorensen discloses, teaches, or suggests the step of situating a non-conducting member adjacent a saw blade, the non-conducting member having a conductive sensor attached thereto defining a danger zone.

For at least the reasons discussed above, Sorensen does not disclose all of the elements of claim 23, and therefore Sorensen does not anticipate claim 23 under 35 U.S.C. Section 102(b). Accordingly, Applicant respectfully requests that this rejection of claim 23 be withdrawn and requests that claim 23 be allowed.

**B. Response To Claim Rejections Under 35 U.S.C. Section 103**

Dependent claims 10, 11, and 13 have been rejected under 35 U.S.C. Section 103 as purportedly being obvious in light of Sorensen. Applicant respectfully traverses these rejections as well. It is well established at law that, for a proper rejection of a claim under 35 U.S.C. §103 the Office Action must establish a *prima facie* case of obviousness by showing some objective teaching in the prior art or generally available knowledge of one of ordinary skill in the art that would lead that individual to the claimed invention. *See In re Fine*, 837, F.2d 1071 (Fed. Cir. 1988).

Accordingly, to make a *prima facie* case for obviousness, there must be some prior art teaching or established knowledge that would suggest to a person having ordinary skill in the pertinent art to fill the voids apparent in the applied reference. *See, e.g., In Re Dow Chemical*, 5 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1988), and *In re Keller*, 208 U.S.P.Q. 871,

881 (C.C.P.A. 1981). It is respectfully asserted that no such *prima facie* case has been made in the outstanding Office Action.

As set forth above independent claim 1 is not anticipated by the Sorensen reference, nor is claim 1 obvious in light of Sorensen. Nothing in Sorensen discloses, teaches, or suggests all of the elements of claim 1. Since claim 1 is allowable, dependent claims 10, 11, and 13 which depend from independent claim 1 are also allowable as a matter of law, because these dependent claims contain all features/elements/steps of their respective independent claim 1. *See In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988).

Additionally and notwithstanding the foregoing reasons for the allowability of claim 1, these dependent claims recite further features/steps and/or combinations of features/steps (as is apparent by examination of the claims themselves) that are patentably distinct from the prior art of record. Accordingly, there are additional reasons why these dependent claims are allowable.

**C. Prior Art Made of Record**

The prior art made of record has been considered, but is not believed to affect the patentability of the presently pending claims.



**CONCLUSION**

In light of the foregoing and for at least the reasons set forth above, Applicant respectfully submits that all rejections have been traversed and that the now pending claims 1-23 are in condition for allowance. Favorable reconsideration and allowance of the present application and all pending claims are hereby courteously requested. If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned attorney at (770) 384-2838.

**PETITION FOR EXTENSION OF TIME**

Pursuant to 37 C.F.R. § 1.136(a), Applicant petitions for an extension of time of three months to and including November 20, 2003, in which to respond to the Office Action dated May 21, 2003. Any fee required for said extension of time are hereby authorized to be charged to deposit account no. 502889. It is not believed that any additional fees are required. However, in the event that any additional fees are required and/or are necessary to allow consideration of this paper, such fees are also hereby authorized to be charged to deposit account no. 502889.

Respectfully submitted,



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